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AMSAT NEWS SERVICE
ANS-107

The AMSAT News Service bulletins are a free, weekly news and information service of AMSAT, The Radio Amateur Satellite Corporation. ANS publishes news related to Amateur Radio in Space including reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

The news feed on http://www.amsat.org publishes news of Amateur Radio in Space as soon as our volunteers can post it.

Please send any amateur satellite news or reports to: ans-editor(a)amsat.org

You can sign up for free e-mail delivery of the AMSAT News Service Bulletins via the ANS List; to join this list see: https://mailman.amsat.org/postorius/lists/ans.amsat.org/

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ANS-107 AMSAT News Service Weekly Bulletins

To: All RADIO AMATEURS
From: Radio Amateur Satellite Corporation
712 H Street NE, Suite 1653
Washington, DC 20002

DATE 2022 Apr 17

AMSAT Gearing Up for Hamvention

With barely one month to go, AMSAT volunteers are busy getting ready to return to the Dayton Amateur Radio Club Hamvention. Running from May 20 to 22, 2022, this will be the 70th Anniversary of the legendary Amateur Radio get-together. After a two-year hiatus caused by the COVID pandemic, everyone is anxious to return to examine the latest in technology and to visit with old friends. As before, Hamvention will be held at the Greene County Fairgrounds and Expo Center in Xenia, Ohio.

AMSAT's presence will be felt in with eight adjoining booths in Building 1. Highlighting the exhibit will be:

- CubeSat Simulator hardware and software demonstrations
- SatPC software demonstrations
- AMSAT Engineering staff question and answer table
- AMSAT Youth Initiative (KidzSat) introduction
- OSCAR ground station for live satellite operations
- Annual Membership sign-up and renewals
- AMSAT President's Club recognition
- AMSAT Board of Directors and Senior Officers Meet and Greet

- AMSAT Store offering AMSAT trinkets, books and Arrow Antennas

Everyone is also invited to two special evening events:

- The annual "Dinner at Tickets will be held on Thursday evening at 6:00 PM at Tickets restaurant located at 7 W Main St, Fairborn, Ohio.
- The AMSAT/TAPR Annual Banquet will be held Friday night at 6:30 PM at the Kohler Presidential Banquet Center located at 4548 Presidential Way, Kettering, Ohio. Tickets are $57 and must be ordered in advance at the AMSAT Store no later than May 13, 2022.

Additionally AMSAT will also host its annual member forum at Hamvention. (Day, time and forum room to be announced.)

Phil Smith, W1EME, AMSAT Hamvention Coordinator, and his team have been working feverishly to make sure everything falls into place for Hamvention. There is still a need for volunteers to help staff the exhibit. With over 800 square feet of booth space and 20 hours of exhibit time, there is plenty of opportunity for members to spend a few hours to meet their fellow members and to help those new to the world of amateur satellites. Anyone willing to help for an hour or two should send Phil an email via w1eme [at] amsat [dot]org.

[ANS thanks AMSAT for the above information.]

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George Carr, WA5KBH
Richard Dittmer, KB7SAT
David Grebe, WA4LM
Nels E. Knutzen, W0PEC
David Hartrum, WA3YDZ
Stephen Howard, AB0XE
Gailen Marshall, N5GDM
Brendan McNeill, ZL3BAM
Ottawa Valley Mobile Radio Club
Maxwell Rathbone, W3POI
Alton Simpson, WA5TJB
Carl Starnes, W4EAT
Paul Stoetzer, N8HM
Christopher Wachs, WA2KDL
Stefan Wagener, VE4SW

More information about the President's Club is available at
https://www.amsat.org/join-the-amsat-presidents-club/.

[ANS thanks Frank Karnauskas, N1UW, AMSAT VP, Development for the above information.]

IARU Coordinates Two Amateur Radio Satellites

The IARU coordinated two upcoming satellites containing Amateur Radio payloads on April 4, 2022.

URESAT
URESAT (HADES-B ITU designation) is a 1.5 P Pocketqube mission sponsored by AMSAT-EA. It will offer licensed radio amateurs around the world the opportunity to relay FM voice and AX.25/APRS 300/1200 bps communications. This will be achieved by implementing a SDR based FM and FSK repeater. A SSTV camera module by Brno University is expected to fly depending on time restrictions. Images would be taken randomly but the SSTV module would contain some ROM coded images to be transmitted as well. URESAT hardware and software subsystems are enhanced versions of the previous AMSAT-EA HADES satellite mission launched on a SpaceX Transporter-3 mission on January 3, 2022. A downlink on 436.888 MHz and an uplink on 145.975 MHz have been coordinated for a V/U FM voice repeater, a beacon with FSK, AFSK and APRS telemetry plus a CW beacon. The launch is planned for a 525km polar orbit with SpaceX in October 2022 managed by Exolaunch/Alba Orbital. More info at https://www.amsat-ea.org.

LightCube
LightCube is a 1U CubeSat educational mission sponsored by Arizona State University. Its aim is to inspire and provide a learning experience to people across the planet by producing a light visible to the naked eye. The flash, expected to be as bright as the International Space Station, will be produced by two Xenon flash tubes. The spacecraft will be triggered by Amateur Radio operators. This mission with its outreach goal of increasing the accessibility of satellites will inspire more people to become Amateur Radio licensees and to continue interacting with more CubeSats. In addition to triggering the LightCube flash, radio amateurs can also download and decode the telemetry information. A downlink on 437.175 MHz using 1k2 AFSK with AX25.has been coordinated. Planning a deployment from the ISS NET October 2022. More information at: https://lightcube.space.

[ANS thanks the IARU for the above information.]

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CEPT SE40 meeting #76 being held April 11-13, 2022 is studying the issue of coexistence between Amateur Radio operation in 1240-1300 MHz and RNSS systems such as Galileo.

One of the agenda items for the World Radiocommunication Conference (WRC23) is AI-9.1b - Measures to be applied in the frequency band 1240-1300 MHz to ensure the protection of the radionavigation-satellite service (RNSS) in accordance with Resolution-774.

SE40 is the CEPT ECC working group that looks at Space Service compatibility issues.

IARU Region 1 has submitted these documents to the April meeting:
â€¢ Amateur density numbers
â€¢ Amateur density numbers Background
â€¢ Updated Proposals for WI_39 report

These papers and other meeting input documents can be downloaded from
https://cept.org/ecc/groups/ecc/wg-se/se-40/client/meeting-documents/?flid=30061

[ANS thanks AMSAT-UK for the above information]

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The ISS callsign was 4Z9SPC.
The downlink frequency was 145.800 MHz.
The crewmember was Eytan Stibbe, 4Z9SPC.
Contact was successful on Thursday, April 14, 2022 at 13:32:09 UTC.

- Ecole Marie Poburan, St. Albert, AB, Canada, telebridge via VK5ZAI
The ISS callsign was NA1SS.
The downlink frequency was 145.800 MHz.
The crewmember was Mark Pathy, KO4WFH.
Contact was successful on Thursday, April 14, 2022 at 17:20:49 UTC.

- DLR School Lab TU Dresden, Dresden, Germany, direct via DL0TSD
The ISS was DP0ISS.
The downlink frequency was 145.800 MHz.
The crewmember was Matthias Maurer, KI5KFH.
Contact was successful on Monday, April 11, 2022 at 14:14:21 UTC.

- Ecole Secondaries St. Albert Catholic High School, St. Albert, AB, Canada, telebridge via IK1SLD
The ISS callsign was OR4ISS.
The downlink frequency was 145.800 MHz.
The crewmember was Mark Pathy, KO4WFH.
Contact was successful on Monday, April 11, 2022 at 15:50:31 UTC.

Upcoming Contacts

- Bellefontaine High School, Bellefontaine, OH, direct via W8BCS
The ISS callsign is presently scheduled to be NA1SS.
The downlink frequency is presently scheduled to be 145.800 MHz.
The scheduled crewmember is Kayla Barron KI5LAL.
Contact is go for Thursday, April 21, 2022 at 17:13:09 UTC.
Watch for Livestream at https://youtu.be/6t5ZQOw2j68.

The latest information on the operation mode can be found at
https://www.ariss.org/current-status-of-iss-stations.html

The latest list of frequencies in use can be found at https://www.ariss.org/contact-the-iss.html

[ANS thanks Charlie Sufana, AJ9N, one of the ARISS operation team mentors for the above information]

Upcoming Satellite Operations

DM02 - April 30, 2022
WL7T: Check twitter for passes.

DM42 - July 30 - August 6, 2022
W3IPA will be on FM passes vacation style. Timothy will be close to DM41 so he might be able to work a gridline. Watch for more updates closer to that week.

[ANS thanks Paul Overn, KE0PBR, AMSAT rover page manager, for the above information]

Hamfests, Conventions, Maker Faires, and Other Events

+ Xenia, OH - May 20-22, 2022
Hamvention
Greene County Fairgrounds, Xenia, OH.

The Dayton Amateur Radio Club will hold the 70th annual Hamvention. AMSAT personnel will be present at its large eight-booth exhibit.
More info available at: https://hamvention.org/

+ Xenia, OH - May 20, 2022
AMSAT/TAPR Joint Banquet
Kohler Presidential Banquet Center, 4548 Presidential Way, Kettering, Ohio

The 13th annual AMSAT/TAPR Banquet will be held at the Kohler Presidential Banquet Center on Friday, May 20th at 18:30 EDT. This dinner is always a highlight of the AMSAT and TAPR (Tucson Amateur Packet Radio) activities during the Dayton Hamvention. This year's banquet will honor the life and accomplishments of long time amateur satellite and amateur packet pioneer Bob Bruninga, WB4APR, who passed away in February.

Tickets ($57 each) may be purchased from the AMSAT store. The banquet ticket purchase deadline is Friday, May 13th. Banquet tickets must be purchased in advance and will not be sold at the AMSAT booth. There will be no tickets to pick up at the AMSAT booth. Tickets purchased on-line will be maintained on a list with check-in at the door at the banquet center. Seating is limited to the number of meals reserved with the Kohler caterers based on the number of tickets sold by the deadline.
Tickets available at the AMSAT Store:
https://www.amsat.org/product/amsat-tapr-joint-hamvention-banquet-registration/.

[ANS thanks AMSAT for the above information.]
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Satellite Shorts From All Over

+ Replacing Satellite Components With SDRs
Traditional satellite RF communication systems can often have drawbacks. Software-defined radio can be used in satellite systems as a replacement for these traditional platforms, and have numerous benefits. SDRs can also be configured to various form factors for different payloads, for instance in CubeSats. In addition to all these, SDRs are extremely rugged and radiation-resistant and area able to withstand the harsh conditions of space. Considering that satellites function in space for decades without any maintenance, this characteristic is particularly of benefit.
Read the complete article at: http://satmagazine.com/story.php?number=1467842844.
[ANS thanks SatMagazine.com for the above information.]

+ Commercial Crew Adapting to Life on the ISS
One crewmember comments, "I think we underestimated just how hard the adaptation would be and sort of how long it would take, Lopez-Alegria said. "You know, we have this phenomenon that astronauts call "space brain" when you get up here, things just take about 33 to 50 percent longer than they normally do. And that's even more true for people who've never been exposed to this environment before."
Read the complete article at: https://tinyurl.com/ANS-107-Crew.
[ANS thanks SpaceFlightNow.com for the above information.]

Join AMSAT today at https://launch.amsat.org/

In addition to regular membership, AMSAT offers membership to:

* Societies (a recognized group, clubs or organization).
* Primary and secondary school students are eligible for membership at one-half the standard yearly rate.
* Post-secondary school students enrolled in at least half time status shall be eligible for the student rate for a maximum of 6 post-secondary years in this status.
* Memberships are available for annual and lifetime terms.

Contact info [at] amsat.org for additional membership information.

73 and remember to help Keep Amateur Radio in Space!

This week's ANS Editor, Frank Karnauskas, N1UW
N1UW at amsat dot org